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Commissioner for PatentsApplication No. 09/689,732

## - REMARKS/ARGUMENTS -

Claims 1 to 25 remain in the application.

As requested by the Examiner, page 8 of the specification has been amended to consistently use the terminology "bottom wall 12".

As requested by the Examiner, claim 1 has been amended to add "of the circuit card" after "connection position".

Claims 1 to 25 were rejected under 35 U.S.C. 112, first paragraph, as containing features not specifically identified in the specification. This rejection is herein traversed.

Applicant has amended page 11 of the specification to set forth that the associated connector recited in claim 1 corresponds to the connection sockets 20.

Page 9 of the specification has been amended to set forth that the sliding member recited in claims 5 and 20 corresponds to base plate 30. Page 9 has also been amended to set forth that the claimed "retaining means" corresponds to the threaded fasteners 37. Page 9 of the specification has been further amended to set forth that the mounting member recited in claims 20 and 21 corresponds to the intermediate or auxiliary component 34. The specification is now believed to contain proper antecedents for all the features recited in the claims.

Claims 8 to 10 and 23 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. In view of this rejection, Applicant has herein completely rewritten claims 8 and 23. These claims are now believed clear and unambiguous.

Claims 1 to 7, 11 to 20, 22, 24 and 25 were rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 5,815,377 (Lund et al.).

Before considering the cited reference, Applicant would like to remind the Examiner that independent claim 1 is directed to a new loading and unloading system for quickly installing and removing a circuit card from an electronic device. The system is characterized by a support structure on which the circuit card is mounted for movement with respect thereto. The support structure is adapted to be loaded within the electronic device with the circuit card movably mounted thereon. An actuator is provided for displacing the circuit card relative to the support structure in order to operatively connect the circuit card to the electronic device after the circuit card has been inserted therein. By movably mounting the circuit card to the support structure, it becomes possible to provide for ergonomic insertion and removal of the circuit card without the need of providing a complicated and cumbersome actuating system within the electronic device.

In contrast, Lund et al. discloses a docketing system wherein a sliding cam assembly has to be mounted within the electronic device to jointly move a card 13 fixedly mounted to a cardholder 15. Lund et al. do not teach or suggest movably mounting the card 13 to the cardholder 15, as recited in amended claim 1. From Fig. 3 of United States Patent No. 5,815,377, it is clear that that card 13 and the cardholder 15 move downwardly as a unit to allow docketing of the card 13. This results in a number of drawbacks. Indeed, such a system requires that the actuator 26 be mounted in the electronic device and that a relatively complex hook mechanism be provided to releasably couple the cardholder and the card to the actuator. In contrast, Applicant's present invention provides for the mounting of the actuator on the support structure and, thus, contributes to minimize the loss of space available for mounting electronic components within the electronic device. With Lund et al.'s system, a distinct sliding cam assembly 26 would have to be mounted under the mother board 10

for each card 13 to be connected thereto. This would result in significant loss of space within the electronic device and would require numerous holes in the mother board 10.

Another drawback of Lund et al.'s docketing system resides in the fact that the downward movement of the cardholder 15, once fully inserted into the electronic device, interferes with an appropriate grounding thereof.

In summary, Lund et al. do not disclose a system for removably connecting a circuit card to a connector of an electronic device characterized in that the circuit card is movably mounted to the support structure.

Independent claim 13 is also believed to be patentable over Lund et al. as reciting a method of connecting a circuit card to an associated connector of a substrate, the method comprising the steps of mounting the circuit card to a support structure displaceable relative thereto and displacing the circuit card relative to the support structure. Lund et al. fails to disclose any structure that could imply the above-mentioned steps.

As to independent claim 20, this claim is believed patentable as reciting a support structure comprising a sliding member, a mounting member movably mounted to the sliding member and an actuator for causing conjoint movement of the mounting member and the circuit card relative to the sliding member. Lund et al.'s support structure includes a cardholder 15 that is adapted to be slidably inserted within an electronic device but does not disclose any mounting member that is movably mounted to the cardholder 15. Indeed the carriers 16a, 16b and 16c are fixed to the cardholder 15. According to Lund et al.'s teaching, the card 13 is fixedly mounted to the cardholder 15 for conjoint movement therewith. In Lund et al.'s system, there is no relative movement between the card 13 and the cardholder 15. In light of the above comments, it is now believed clear that claim 20 defines patentable subject matter over United States Patent No. 5,815,377.

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The remaining references cited by the Examiner have not been alleged to nor do they rectify the deficiencies noted above. Thus, the depending claims are patentable for at least the reasons outlined above with respect to claims 1, 13 and 20.

As set forth above, it is submitted that none of the references relied upon by the Examiner disclose or suggest the presently-claimed invention. In view of the foregoing, it is respectfully urged that the present claims are in condition for allowance. An early notice to this effect is earnestly solicited. Should there by any questions, the Examiner is courteously invited to contact the undersigned.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attachment is captioned "Version With Markings To Show Changes Made".

Respectfully submitted,

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By:



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Date

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Encl. - Version with Markings

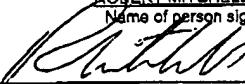
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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE DISCLOSURE:**

The paragraph beginning at line 8 of page 8 has been amended as follows:

Positioned within the main chassis 10 adjacent the base-bottom wall 12 and planar with the top wall 14 is a motherboard 18 having electrical components positioned thereon.

The paragraph beginning at line 6 of page 9 has been amended as follows:

The sliding component 28 is configured and sized so as to be slidable within the guiding channels 25 and 26. As seen in Fig. 2, the sliding component 28, in turn, includes a sliding member or base plate 30 preferably having a generally rectangular configuration and defining a pair of opposed plate guiding edges 32a and 32b adapted to be respectively engaged with the guiding channels 25 and 26. An intermediate or auxiliary component 34 acting as a mounting member for an extension card 54 is moveably mounted to the base plate 30 so as to allow movements thereof in a predetermined direction over a predetermined distance relative to the base plate 30. According to a preferred embodiment of the invention, the auxiliary component 34 can move in a direction generally perpendicular to the plate guiding edges 32a and 32b relative to the base plate 30.

The paragraph beginning at line 22 of page 9 has been amended as follows:

As seen in Fig. 2, auxiliary component 34 is formed of a first plate 34a rigidly mounted to a second plate 34b by means of four screws 33. The first plate 34a defines four slots 35 which, once the first plate 34a has been assembled to the second plate 34b, are disposed in register with four corresponding guiding slots 38 defined in the second plate 34b. Slots 35 are larger than guiding slots 38 for purposes to be

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described hereinafter. Plates 34a and 34b are mounted to the base plate 30 via four retaining means or threaded fasteners 37 threadably engaged with the base plate 30 and extending through respective guide members 36 engaged in associated pair of adjacent slots 35 and 38 for sliding movements therein. Each guide member 36 is provided with an annular peripheral shoulder 39 which is received in the corresponding slot 35 and which overlies the surface of the second plate 34b surrounding the guiding slot 38 in which the guide member 36 is engaged, thereby retaining the auxiliary component 34 to the base plate 30, while allowing relative movement therebetween.

The paragraph beginning at line 7 of page 11 has been amended as follows:

The extension card 54 is rigidly mounted to the first plate 34a of the auxiliary component 34 for conjoint movement therewith. The extension card 54 has an electronic circuitry mounted thereon and is provided with a card mating edge 56 defining recesses 58 provided with pins configured and sized to be matingly and operationally engageable with the associated connector or connection sockets 20 for electronic connection therewith.

IN THE CLAIMS:

Claim 1, 8, 13 and 23 have been amended as follows:

1. (amended) A system for removably connecting a circuit card to a connector of an electronic device, comprising a support structure for loading a circuit card into an electronic device, said circuit card being supported by said support structure and displaceable relative thereto, said support structure being adapted to be slidably inserted along a first axis within the electronic device to a first position, and an actuator operational to mounted to said support structure for selectively displacing the circuit card relative to the support structure along a second axis from

said first position to a connection position of the circuit card where a connection portion of the circuit card is operatively coupled to the connector of the electronic device, and from said connection position to a disconnection position wherein the connection portion of the circuit card is disengaged from the associated connector of the electronic device.

8. (amended) A system as defined in claim 7, wherein retaining means secured to said sliding member are constrained to move in slotted guides defined in said intermediate members slotted guides are defined in said intermediate member, and wherein retaining means are provided for mounting said intermediate member to said sliding member, said retaining means being constrained to move in said slotted guides, thereby retaining said intermediate and sliding members together while allowing relative movements therebetween.

13. (amended) A method of connecting a circuit card to an associated connector of a substrate, comprising the steps of: mounting the circuit card to a support structure displaceable relative thereto, guiding said support structure with said circuit card mounted thereon in a first direction along a card path to a first position relative to said substrate, and displacing said circuit card relative to the support structure from said first position to a connection position, wherein the card connector of the circuit card is operatively coupled to the associated connector of the substrate.

23. (amended) A support structure as defined in claim 22, wherein slotted guides are defined in said intermediate member, and wherein retaining means are provided for mounting said intermediate member to said sliding member, said retaining means being constrained to move in said slotted guides, retaining means secured to said sliding member are constrained to move in slotted guides defined in said mounting

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member, thereby retaining said mounting and sliding members together while allowing relative movements therebetween.